48

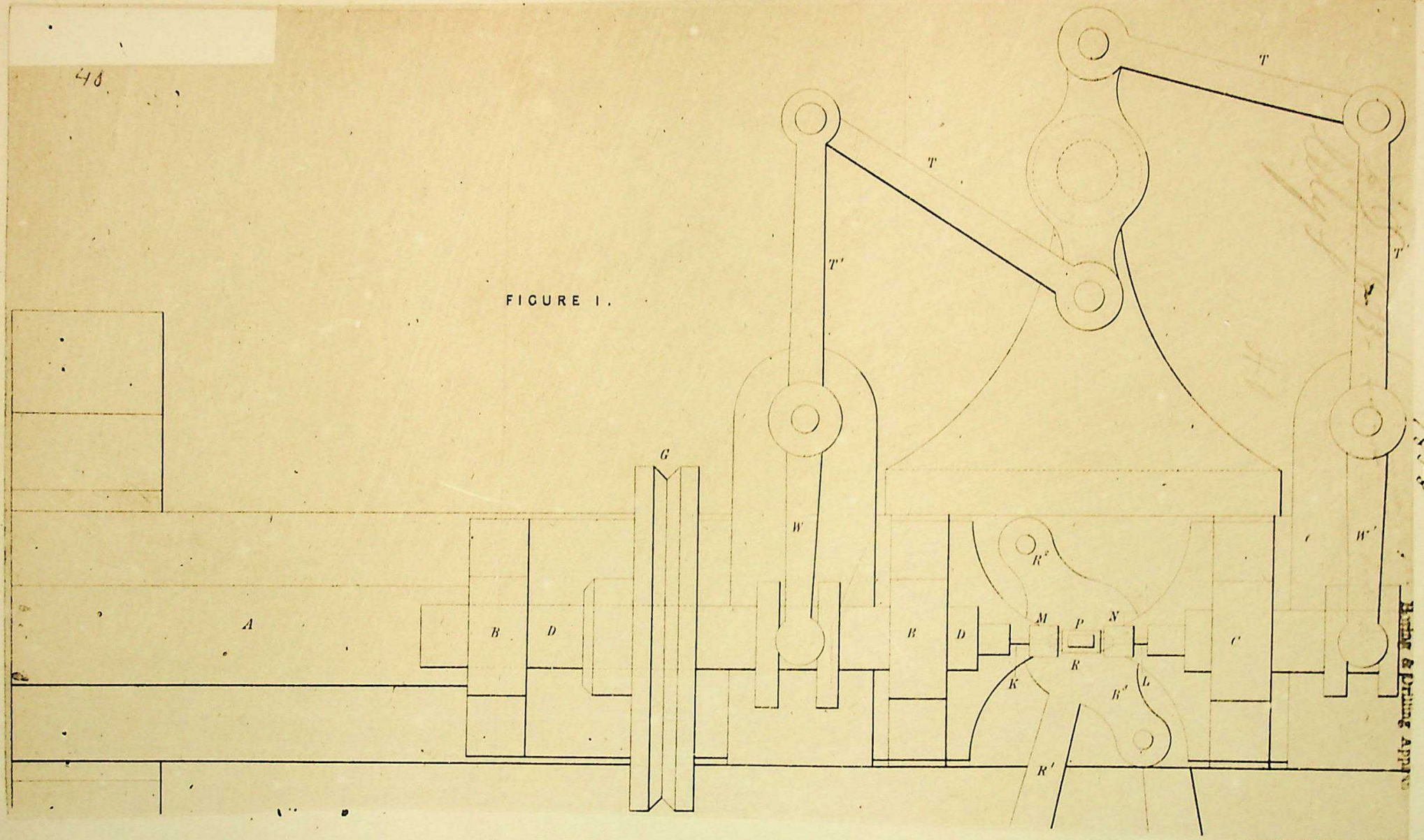

FIGURE 1.

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17. METAL WORKING
Boring & Drilling Appa

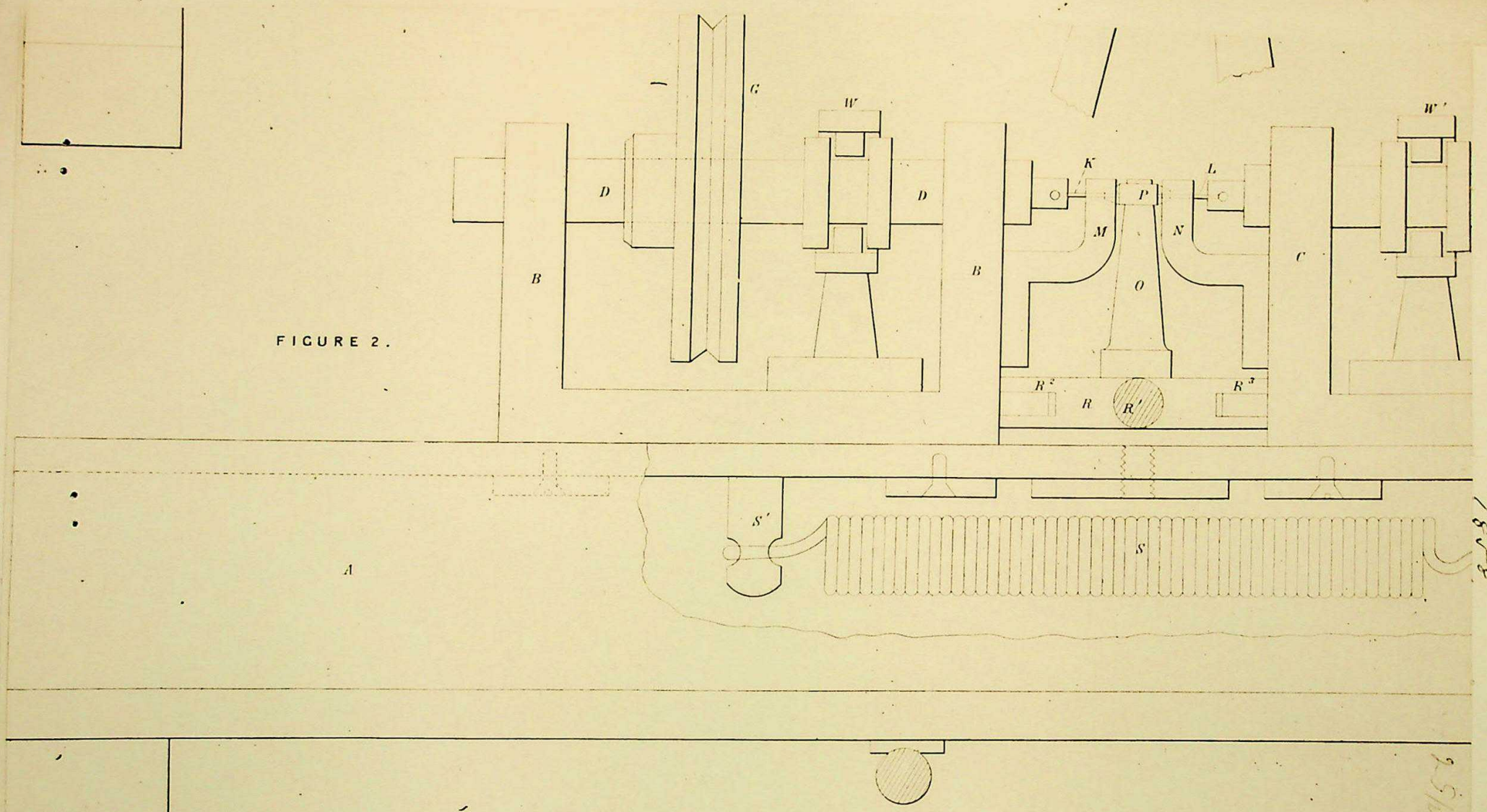

FIGURE 2.

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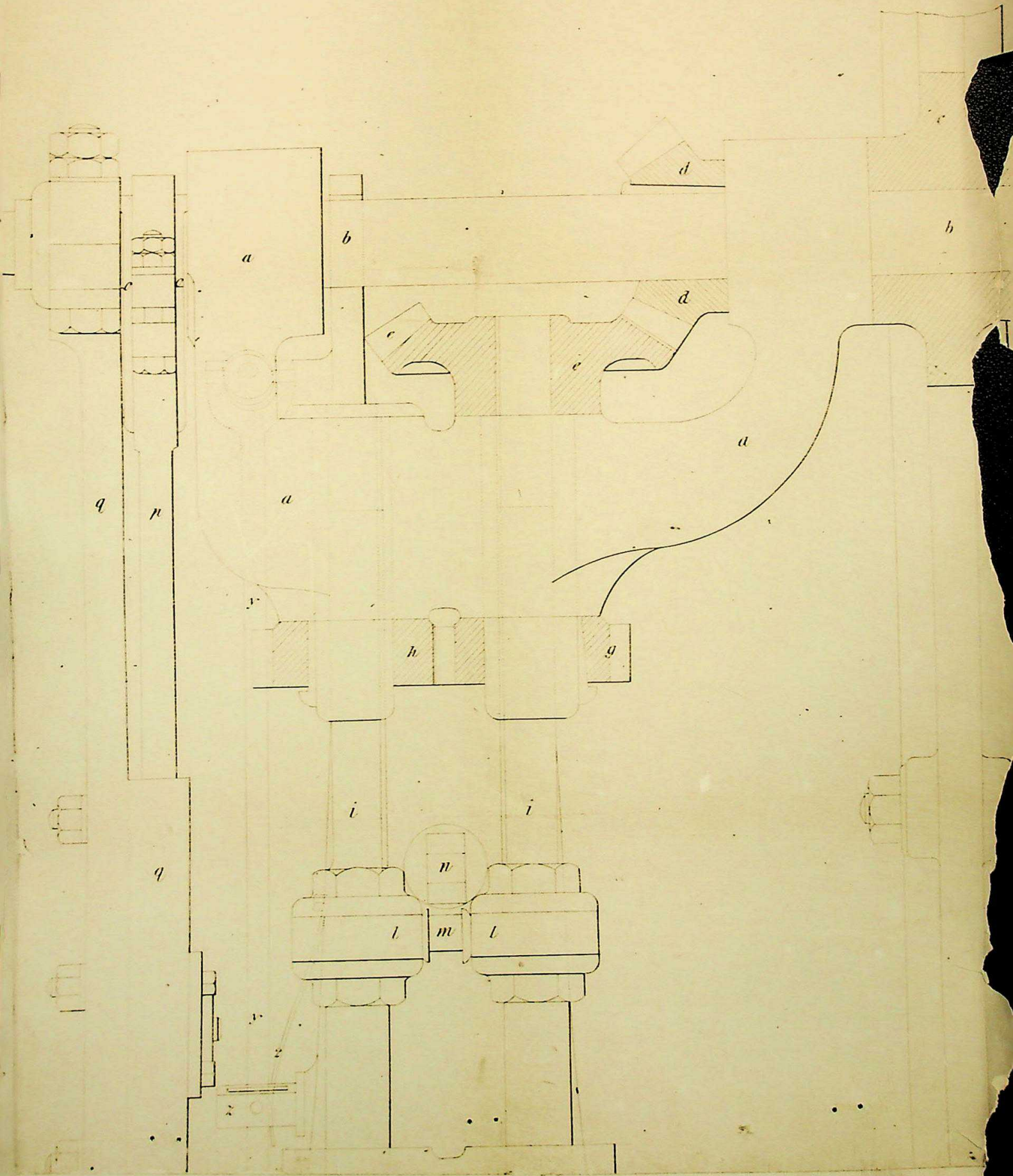
No 2893 Johnson
Dec 7, 1858



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T. E. & J. Johnson

Dec 17, 1858

2893

1858

"My invention relates — to a method of cutting the rails so as to have exact lengths. — to apparatus for making fish joints" and consists in combining the cutting apparatus with a drill, or drills so that the two operations of cutting to length and drilling the holes may proceed simultaneously"